RANGE AND REPERTORY IN CAPITAL DESIGN

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Ernst Kitzinger, in Byzantine Art in the Making, used the design of column capitals as a measure of change in the aesthetic goals of an entire culture. His work treats Early Byzantine capitals as a sculptural genre, illustrating a code under revision; it raises the question of how such changes become general, without becoming standardized. The answer that his examples suggest lies in the observation of significant details, particularly since the study of capitals from the fifth and sixth centuries shows that capitals were important enough features of architectural sculpture to challenge their makers in the production of many new designs, with a wide variation of types throughout the empire. My aim in this short discussion is to recommend a way of tracing how the new designs, or their reshaped elements, appeared and spread.

To understand such a process, for want of more specific textual help than, for instance, Choricius of Gaza's allusion to sixth-century experts on capitals, the art historian turns back to Vitruvian clas-

¹Byzantine Art in the Making (Cambridge, 1977), 76-80 and, for basic references, notes 33, 34, 36, and 40. More recent contributions to the field of capital study in the Early Byzantine period include E. W. Betsch, The History, Production, and Distribution of the Late Antique Capital in Constantinople, Diss. (University of Pennsylvania, 1977); F. W. Deichmann, J. Kramer, and U. Peschlow, Corpus der Kapitelle der Kirche von San Marco zu Venedig, ForschKA 12 (Wiesbaden, 1981); R. M. Harrison, Excavations at Saraçhane in Istanbul, I (Washington-Princeton, 1986); J. P. Sodini, "Un chapiteau 'mixte' d'époque paléochrétien à Delphes, Rayonnement grecque: Hommages à Charles Delvoye, ed. L. Hadermann-Misguich, Georges Raepsaet, Guy Cambier (Brussels, 1982), 325-40; C. Strube, "Die Kapitelle von Kasr ibn Wardun," JbAC 26 (1983), 59-106, and Polyeuktoskirche und Hagia Sophia: Umbildung und Auflösung antiker Formen, Entstehen des Kämpferkapitells, AbhMünch, Philos.-hist. Kl., N.F., 92 (Munich, 1984). Further references are cited by the present author in a doctoral thesis written under the supervision of Professor Kitzinger, The Capitals and Other Granite Carvings at Justinian's Church on Mt. Sinai (Harvard University, 1986). Many of the topics discussed more fully in the thesis are mentioned below or summarized in "An Introduction to Stephen of Aila's Capitals at Mt. Sinai," The 17th International Byzantine Congress: Abstracts of Short Papers (Washington, D. C., 1986), 207.

sifications.2 Yet the reading of Vitruvius has unfortunately hindered the recognition of some of the most important sources of design for Early Byzantine architectural sculpture, as for later medieval capitals in both East and West. Neglecting his advice that sculptors may have full reign to create new forms of capital, readers in the past have often limited themselves to a "strict constructionist" interpretation of his formulae for ordinary Doric, Ionic, or Corinthian design. There is more to learn from Vitruvius, and particularly from his concern for two limits to the invention of true sculptors' capitals: the keeping of proportional rules and the selection of appropriate motifs. Both of these concerns are helpful for the study of later capitals. The charting of proportional changes and the analysis of what was appropriate where, and why, are an open field. The types Vitruvius knew and expected his readers to know without descriptions may have been lost or ignored by following generations, yet Byzantine builders evidently knew and chose, by preference, such antique types as twozone, windblown, or basket capitals. At the same time, distinctions between types are constantly in flux, as individual motifs flow readily from the designs of one type to another. They are the elements of repertory, and their range is surprisingly wide. Recognizing and defining them can lead to illuminating comparisons and to the making of specific distinctions between one form and another. The typology they introduce is highly complex yet freed from a dependence on oversimplified or anachronistic criteria. Once the range of a given repertory has been perceived, it becomes possible to set up historical and regional landmarks for its

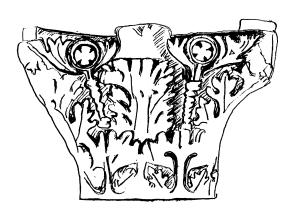
²Laudatio Marciani, 2.53, trans. in C. Mango, The Art of the Byzantine Empire: Sources and Documents (Englewood Cliffs, 1972), 72. Vitruvius, in De architectura, gives advice for the making of Doric capitals in 4.6; for Ionic, in 3.5:5–8; and for Corinthian, in 4.11–12; this last-cited chapter closes with his explantion of how other types of capital are invented. See also 1.2 and, for his interest in proportion, 3.1.

development. Many elements are so versatile that they may be included in several types of capital, as well as in other media, and in other forms of architectural sculpture.

To find such motifs requires a method or a key. This key to understanding the designs of most capitals is in the horizontal and vertical axes. It is not enough to group whole capitals by foliage type alone, without considering the distribution of detail along the axes.³ In a period marked by diversity and contrast of foliage in a given building or even on a single piece of architectural sculpture (as in the compound grouping of pier and column capitals of Fig. 1), to consider one type of foliage as representative of a time or place can be misleading.

As Kitzinger demonstrates in his analysis of an undulating Justinianic capital,4 the vertical axes of a Corinthian abacus are primary ones, dividing a capital into a composition of four faces, while uniting the shared corner units under the angles of the abacus, and providing a central axis down the middle of each face in line with the abacus boss. These primary directional axes, on a Corinthian capital, fall along the midribs of the taller or upper register of leaves. Between them fall minor axes, where the sources of Corinthian volutes spring. Horizontal registers are generally determined by the levels of the foliage, and by any units marking the level of a horizontal band, frieze, or molding just under the abacus where the volutes and echinus of a composite capital would be. With these principles in mind, it is possible to see elements that may have been transferred to or derived from other settings. For example, the leafy sprays derived from the acanthus sheaths at the sources of Corinthian volutes become a series of separate motifs in their own right. On the capital of Figure A, for instance, the elements derived from the sources of volute pairs on the minor axes instead support, in their forks, medallions with crosses. The volutes and their sources in Figure 1, on the other hand, are Corinthian elements inserted into an essentially composite design.

The pilaster capital from the propylon of the Theodosian Hagia Sophia presents this unit, the



A. Deir el Ahmar (Sohag), limestone capital adossed to wall

leafy spray, as an open foliate cup under the flat stem of the volute (Fig. 2).⁵ The leafy extensions of the cup branch out, curving to left and right. A console in the form of a capital, under a lintel in the north gate of the Rusafa city walls, features a similar unit on its central axis (Fig. 3).⁶ The spray is deployed so that its upper edges define the rim of the top of the bell, in the same way as leafy sprays of the same derivation form a frieze across the top of the capitals of Figures 1 and 4.

At Kalat Seman the carvers of the capitals on the octagon pier (Fig. 1) have adapted the leafy spray motif to the column and pilaster capitals' respective and intentionally contrasting foliage. The small Kalat Seman capitals (Fig. 4) offer a more horizontal version of the Rusafa console, filling the central axis and defining the top of the capital (even though, on the windblown capital at the left, the stem is diverted off the axis, between the tilted leaves). The Deir el Ahmar capital (Fig. A), however, varies the motif with the addition of the cross-medallion in the center of the spray. The extension of the leafy spray on all these limestone capitals goes with a more general and widespread

³Double capitals divided in half to be fitted against the sides of an opening often provide striking examples of contrasting foliage types. See Sodini (note 1 above) and Strube, *Polyeuktoskirche*, fig. 51; also S. Ćurčić and A. St. Clair, *Byzantium at Princeton: Byzantine Art and Archaeology at Princeton University* (Princeton, 1986), cat. no. 3.

¹Byzantine Art in the Making, 79.

⁵T. F. Mathews, *The Byzantine Churches of Istanbul: A Photographic Survey* (University Park, 1976), fig. 31–6; see also p. 266 for bibliographical references. For permitting me to use his photographs for Figs. 2, 5, and 6, I thank Thomas Mathews.

⁶For the context see W. Karnapp, *Die Stadtmauer von Resafa in Syrien*, Deutsches Archäologisches Institut, Denkmäler antiker Architektur 11 (Berlin, 1976).

⁷For an illustration of the capital in its setting, including a friezelike necking band, see G. Duthuit, *La sculpture copte: Statues, bas-reliefs, masques* (Paris, 1931), pl. L1.

phenomenon: the increasingly horizontal treatment of the upper part of Corinthian capitals.⁸ By analogy with the often foliate echinus of composite capitals,⁹ this spreading of the bipartite leafy sprays may be seen as the articulation of a Corinthian echinus frieze. Yet its application reaches beyond Corinthian settings.

Two very different Justinianic marble capitals will serve as illustration. The first is an Ionic capital from the gallery of the church of St. John at Ephesus (Fig. 5). The main face of the echinus bears a simple frieze of upright acanthus leaves; on the side, our Corinthian leafy spray appears complete with a pair of inner volutes in low relief. So thoroughly horizontal has the motif become, that it is now at home in this Ionic setting. Significantly, the spray is here inverted.

Inversion, or change in direction, is one means of producing variations on a theme in sculpture; others are changes in scale or in plane. All three occur with many particular motifs on Early Byzantine capitals. There is a change in scale and a planar flattening at the base of the calyx when its swelling knob, departing from the recognizable form it takes on the Rusafa console, is pressed into three sepals at the left of the Kalat Seman pier capital. But on the propylon pilaster capital of Figure 2, the knob is inverted as well as flattened, becoming a stemless triangle stabilized by the inversion.

There is inversion again in the second example from a Justinianic church. The horizontal leafy spray, turned upside down, appears on the great monogram capitals of Hagia Sophia (Fig. 6).¹¹ On the lateral face, the horizontal leafy spray descends to cover the entire bell. Below the Ionic volute and bolster structure, the inverted leafy spray unit, vertically repeated, forms a winged chain, joined together on the central axis. The leafy spray, selected for its flat axial symmetry, betrays the double typology of the capital: Corinthian by virtue of its leaf-clad bell, but Ionic by virtue of its volutes. The echinus of an Ionic capital does not properly appear on the lateral faces, being confined to the

horizontal stretch on the other two faces, between the coils of the volutes. Here the motif of the leafy spray, borrowed from a Corinthian echinus, underlies not the stems of Corinthian volutes but the bulk of the bolster's roll, in a transition from plane to volume. This arrangement precludes the need for a leaf to bridge the angles of the capitals; the two large acanthus leaves confined on the capital's main face, without any crowding, can effect a change of direction, billowing out from the planar surface of the bell to shape the mounded base of the monogram's medallion.

A change of plane separates the leafy spray from its stem on the three handsome matching silver patens of the "Sion" treasure.12 One of them, inscribed to the donor Eutychianus, is at Dumbarton Oaks; a frieze of extended sprays fills the border of the rim (Fig. 7). The stems are discernible in the divisions between the arched units of the descending plane, or chute, as between the leaves of a capital. And as on a Corinthian-echinus column capital, the frieze of sprays takes the outer plane, with its stems appearing below on another plane. The arched, leaf-shaped units flanking the stems on this second plane are given smooth surfaces, with additional motifs tooled on them, like patterns on the leaves of certain Corinthian capitals of the period.¹³ The stem springs from the junction



B. Kalat Seman, detail of limestone capital

⁸ Kitzinger, Byzantine Art in the Making, 77, 80.

⁹A good example of the foliate echinus frieze is the composite capital of the Studion type; cf. Mathews, *Byzantine Churches*, fig. 15–20.

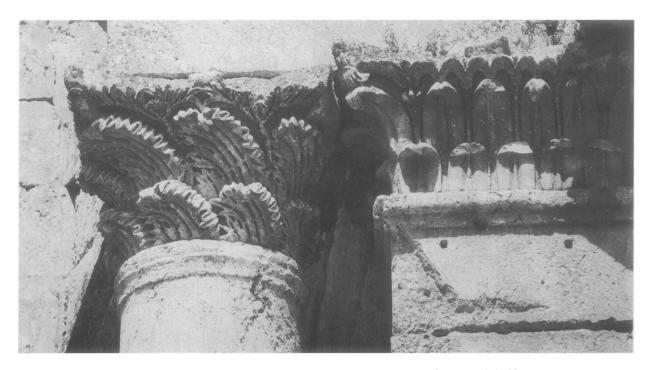
fig. 15–20.

10 When the two-part leafy spray is removed from the Corinthian bell, it becomes symmetrical, there being no longer any need for one branch to reach further than the other.

¹¹Mathews, *Byzantine Churches*, fig. 31–50. An axial void defines the faces of the bell: cf. the pilaster capital on the pier, borrowing acanthus lobes and volutes from the absent faces, and Mathews, figs. 31–51, 31–72, and 31–73.

¹²Susan Boyd has presented this treasure at the Symposium on Ecclesiastical Silver Plate, The Walters Art Gallery and Dumbarton Oaks, May 16–18, 1986, and at the Seventeenth International Byzantine Congress in the same year, in papers as yet unpublished at the time of my writing.

¹³See, for instance, the treatment of the leaves on several capitals at Sinai: G. H. Forsyth and K. Weitzmann, with I. Ševčenko and F. Anderegg, *The Monastery of Saint Catherine at Mount Sinai. The Church and Fortress of Justinian* (Ann Arbor, 1965), in particular pls. LXII, A and D.



1. Kalat Seman octagon, limestone capitals at north pier of east arch (west face, north half) (photo: Dumbarton Oaks)



2. Istanbul, Hagia Sophia, marble pilaster capital of Theodosian propylon (after T. F. Mathews, *The Byzantine Churches of Istanbul*, fig. 31-6)



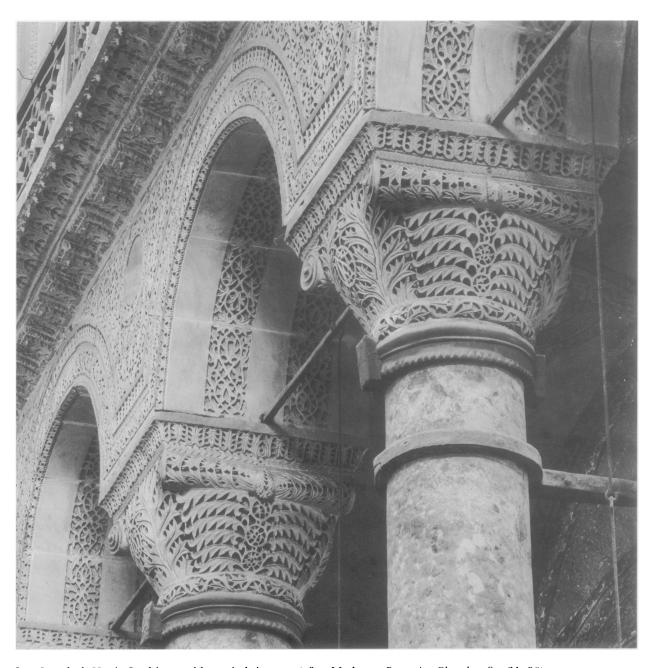
3. Rusafa, city walls, limestone console (west jamb of central door, north inner gate) (photo: Dumbarton Oaks)



4. Kalat Seman, west basilica, fallen limestone capitals (west end, undercroft) (photo: Dumbarton Oaks)



5. Ephesus, St. John, marble capital in gallery (photo: T. F. Mathews)



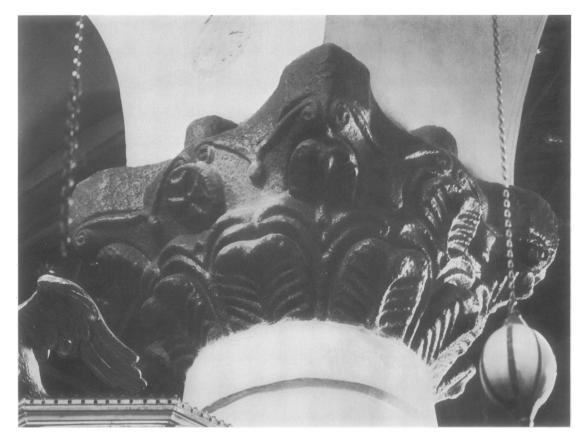
6. Istanbul, Hagia Sophia, marble capitals in nave (after Mathews, Byzantine Churches, fig. 31–50)



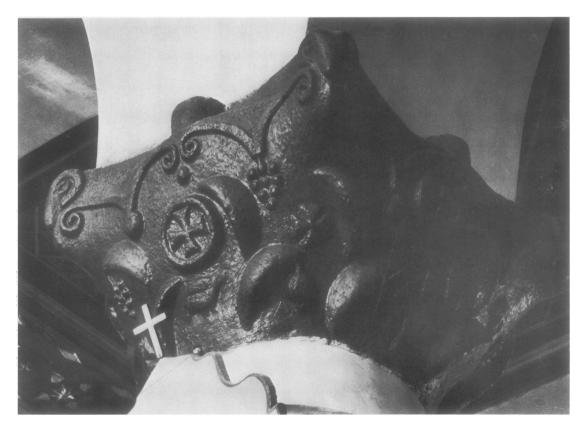
7. Dumbarton Oaks, silver Eutychianus paten, detail (photo: Dumbarton Oaks)



8. Dumbarton Oaks, silver capital, detail (photo: Dumbarton Oaks)



9. Sinai, St. Catherine, granite capital in nave (photo: B. Brenk)



10. Sinai, St. Catherine, granite capital in nave (photo: B. Brenk)

of two lobes of a scrolling base. This detail also appears in capitals, as for instance at the base of the stems supporting the leafy sprays on another Kalat Seman octagon capital, where the two curved lobes belong not to a border but to the acanthus foliage (Fig. B).¹⁴ So small a detail, in such a different usage, bears witness to the repertory's adaptability.

Another piece of silver in the Sion collection is an actual capital, on a revetment for a colonnette (Fig. 8),15 which may be compared to the extremely abstract and varied granite capitals in the Justinianic basilica at Mount Sinai. These comparisons reveal the process of design in the soft silver and in the intractable stone as surprisingly akin. The first comparison concerns the three-part sprig at Siani. It occurs there in several forms, including one like a lotus bud or a lily, in an analogous position to the similar unit on the silver capital, where its shape, a combination of the volutes' stems with a bud in their fork, more clearly than any of the Sinai examples shows the origins of the motif in architectural sculpture. The second comparison turns to the treatment of foliage, in the ribbing of the leaf surface on the silver capital and on one of the capitals at Sinai. The third and last comparison returns to a question of general structure. It reveals, in both silver and granite, a Corinthian change characteristic of the period, when the upper surface of the bell suppresses or modifies the convex rim below the abacus.

To prepare for the delineation of a bud in the fork, volutes and their stems must be flat, clearly outlined surface features. Such volutes, the curled terminals of bandlike stems, characterize many Early Byzantine Corinthian types. In this respect the propylon pilaster capital of the early fifthcentury Hagia Sophia is akin to a late Justinianic nave capital in the Sinai church (Fig. 9)¹⁶ and to the silver Sion capital.

Kitzinger has observed the absorption of the Corinthian calathos, or bell, with its circumferential rim, in the fusion of capital and abacus, or the

massing of the capital's upper elements.17 Along with changes in the modeling of the bell's upper rim, the conception of volute and stem as surface features belongs to the same series of developments in the upper register of the capital, up to and sometimes including the abacus. As part of this common process of change, the remaining part of the exposed bell, with its rim, is treated on more than one type of capital as if it were a flexible membrane. The rim, no longer flaring outward, takes on an upward curve, as the second dimension predominates over the third. The surface structure of the capital, from the foliage inward, begins to be conceived as if it could be peeled away. There were practical advantages to the resulting economy of form. One was economy of material: marble export capitals, like those of S. Apollinare Nuovo in Ravenna, could be shipped with less danger of breakage; or capitals previously damaged by falling, perhaps during an earthquake, could more easily be recut and shaped into new types without being drastically diminished in size. Twodimensional patterns for capitals could be more directly transferred into stone. Yet if these advantages were realized, they fail to make other types of capital disappear during the sixth century, when extravagance either of form or of material is often a desired end. Nevertheless, the bud in the fork of the volutes' stems on Corinthian capitals of generally Corinthian design springs, like the horizontal leafy spray, from a shift in emphasis at the top, away from the circumference, in favor of the surface. The shift is manifest in the flattening upward of the bell's rim.

How it happens is visible in the exposed segment of a bell between a pair of inner and outer volute stems. When the carver, in outlining this segment, abandons the illusion of the rim's continuity around the whole capital, the segment appears in isolation, a token shape held firmly between the stems. As the segment narrows and flattens, its edge curves upward so that it begins to look like a curved petal or a lobe (Fig. C). The lobe becomes a bud. The capital has lost a horizontal feature, and gained a new motif on the secondary axis, to be displayed on the now unified surface below the

¹⁴The detail in the illustration is drawn from a photograph by T. Jacoby, neg. no. 1975, #1–44, in the Dumbarton Oaks Photograph Collection. It represents the right-hand leafy spray on the west face of the south column capital of the interior east arch of the octagon.

¹⁵See note 12 above. I am very grateful to Susan Boyd for allowing me to illustrate this detail of an as yet unpublished piece.

¹⁶To Beat Brenk I give my thanks for the use of his photographs in Figs. 9 and 10. This capital is one of a group at Sinai with Corinthian volutes; cf. Forsyth et al., *Saint Catherine*, the capitals with Corinthian volutes, pls. LXII, A–D; LXIII, C; LXIV, B–D.

¹⁷Byzantine Art in the Making, 77.

¹⁸The progression is clear in the comparison of three Jerusalem capitals; R. Kautzsch, *Kapitellstudien, Beiträge zu einer Geschichte des spätantiken Kapitells im Osten vom vierten bis ins siebente Jahrhundert* (Leipzig, 1936), nos. 317, 320, and 294. In 317 the rim of the bell appears only in the fork of the volutes' stems; in 320 these segments have become lobes; and in 294 they are petals or buds.



C. Typological detail: lobe in fork of volute stems

abacus. On the silver Sion capital the process is complete.

At Sinai it goes further. Deprived of volutes, the bud with stems on either side becomes a discrete unit on the secondary axes, a flat, lilylike filler between the leaves of the upper register (Fig. D).¹⁹ On other Sinai capitals it migrates in another form, to the primary axes in the lower register, separating and framing the leaves there (Fig. 9).²⁰ An analysis of the bud in the fork shows how it assumes an independent identity like that of the leafy spray, so that its eventual uses differ widely from its origins, as its designers vary not only its form but its placement, moving it from one axis or position to another.

The leaves of the Sinai capital in Figure 9 nestle into sockets or under arches shaped for them by three-part sprigs with the bud (or its single or triple equivalent) in their fork. The major leaf surfaces are ribbed like the foliage on the silver capital, in deliberate contrast with the lack of substance in the volutes. In both cases the ribbed leaf is an unusual type. The spacing of foliage on the nave face of the capital bares a wide surface on the central axis of the upper register, to receive a cross in a medallion. The silver capital offers in high relief only the foliage and the enlarged abacus boss. The metalworker, as if to deny that his material provides merely a thin casing for a solid core, has increased the bulky aspect of the leaves by increasing the depth of their tops, rounded out behind the face, and by ribbing the resulting bulge to match



D. Sinai, St. Catherine, detail of granite capital in nave (second column from east, north arcade)

the ribbing on the face of the leaf. But the stonecutter, working a rough mass of granite, gives his leaves smooth, planar, winglike lobes at their summit, under tops carved into a gentle dip. The larger scale and the harder material permit him to offer broader surfaces and subtler variations in detail. His modeled leaves contrast with the carving of the bud-in-fork motifs to create a surprising visual richness, using plane and shadow for surface interest, as a counterpart to the interplay of tooling and smooth shine in the silver.

The abacus is more emphatically profiled in the granite than on the silver capital, curving back from the upper edge of the face beneath it. Yet this edge is no longer the circling rim of a Vitruvian bell; it spreads out as the upper limit of a broad field. The design for the top of this face, as for the upper part of a silver capital, provides a smooth surface to serve as a ground, or foil, for the relief. This neutral, spreading field on column capitals is one of the benefits derived from the transformation of the bell's rim not only on the mural surfaces of pilaster capitals, but also in the round.21 At the same time, the neutrality of the field, and the frequency of the omission of the bell rim's in the sixth century, reveal a new attitude. The solid core, becoming neutral, recedes from the eye in relation to the units of relief. This effect is significantly different, yet paradoxically in line with a fifth-century

¹⁹ Forsyth et al., Saint Catherine, pls. LXIII, B; LXV, B–C. Note the variations in scale among these fillers, and their different kinds of outlining or negative relief, composed to fit the somewhat different structural arrangements of each capital. Kautzsch, no. 327 is a Jerusalem capital with a three-pointed filler in the fork of the volutes' stems.

²⁰ Forsyth et al., Saint Catherine, pls. LXII, A, C, D; LXIII, B; LXIV, D; LXV, B. Again, there is variation: the capitals in LXIII, B and LXV, B present the three terminals in positive relief; on the others they are negative.

²¹ Variations of the rim are no more reliable than leaf types for establishing an exclusive chronology. The Sinai capitals demonstrate more than one kind of modification; at least two of them keep the protruding relief of a Corinthian bell's rim, although compressing it between enlarged corner masses; other Sinai capitals straighten it into a hard horizontal border or deepen it into a round echinus-like molding. See Forsyth et al., Saint Catherine, pl. LXIV, B, and pl. LXIII, C, in contrast with the straight tops in pls. LXIV, A and LXV, B–C. The echinus appears in the twin capitals of pls. LXI, A and LXV, A, and in pls. LXII, B and LXIII, C (where, unlike a composite echinus, it is recessed behind the outer plane of the bowl below).

tendency Kitzinger has described: "the bringing out (as against the dissembling) of basic forms and structural matrices; and the simultaneous dematerialization of these matrices."²²

Taking Sinai again as a point of departure, a final example of this paradox shows how parts can be made to stand for a familiar whole, once a known scheme is accepted. The capital in Figure 10²³ has cupped, crescent-shaped foliage arranged to honor the Corinthian tradition of alternate axes, but with directional rather than axial alternation. The leaves bending one way in the upper register abut leaves, in the lower register, bent in the opposite way. The arrangement is a familiar one among Early Byzantine windblown capitals, with this exception: only the tips or curled edges of the leaves are represented here. The Sinai stonecutter was not the first shaper of such leaves. There is a similar abstraction in the foliage of a stucco console from Palmyra (Fig. E)24 but with the bodies of the leaves suggested, in addition, by incised lines on the surface. Nor is the solidly curled, cupped tip of the leaf at Sinai an anachronism; a similar effect, though attached to a whole leaf body, is worked in the silver of the so-called "Homs" vase in the Louvre.25

In the spaces cleared by the special treatment of the foliage, the Sinai stonecutter has inserted individual representational reliefs on the exposed core of the capital's bell. The hard uncompromising stone of the matrix is to a considerable extent dematerialized to the mind's eye by ideas set forth in code, and by the complex themes of fruitfulness, softness, salvation, and flexibility. As if set, not visually but conceptually, in a breezy and refreshing paradisal garden, out of the rocky wilderness, these images appear among the leaves: a tall



E. Palmyra, stucco console, detail (after Fellmann and Dunant)

palm-tree cross, approached by an overlapping pair of sheep; and assorted birds and fruits, fruit baskets and crosses, scattered seemingly at random. Although in its particular combinations this capital seems to form a class of its own, it stands as a reminder that representational motifs are an important part of the repertory of capitals, and that the foliage itself can be signitive.

Why are these other motifs here added to the format of the windblown leaves? How do they affect the structure of the capital's elements? Are they related to each other integrally by their Christian references, and should a similar question apply to the fruit baskets and spriglike trees on the bosses of the Sion capital? By asking such questions the student of capitals may hope to follow Kitzinger's example. He has pioneered the successful matching of motifs from the repertory of capital design with their reflections in two dimensions, in "The Horse and Lion Tapestry at Dumbarton Oaks."26 This small fruit of my own work with capitals, under his supervision for many years, I dedicate to him with grateful affection. His interests, his wide-ranging knowledge, and his perceptions of ever-new ways to organize an expanding body of material open many new directions to explore.

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²²Byzantine Art in the Making, 80.

²³Cf. the west face of the capital, Forsyth et al., Saint Catherine, pl. LXIV, C.

²¹R. Fellmann and C. Dunant, *Le sanctuaire de Baalshamin à Palmyre* (Rome, 1975), 86 f, cf. fig. 3, 1 and 3; and pl. 1, 6.

²⁵The work is reattributed to Syria by M. M. Mango, Silver from Early Byzantium: The Kaper Koraon and Related Treasures (Baltimore, 1986), cat. no. 84.

²⁶DOP 3 (1947), 1–72.